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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,495	07/02/2003	Tienteh Chen	200209928-1	4418

7590 10/04/2004  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT PAPER NUMBER

1774

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/613,495	CHEN ET AL.	
	Examiner	Art Unit	
	Pamela R. Schwartz	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20030702</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-8, drawn to a print medium, classified in class 428, subclass 32.1.
  - II. Claims 9-15, drawn to a method of forming, classified in class 427, subclass 146.
  - III. Claims 16-20, drawn to a method of using, classified in class 347, subclass 105.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group II and of Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a materially different method such as by casting and drying the ink-receiving layer, applying the coated paperbase thereto using adhesive, and peeling the ink receptive layer from the casting surface.

Inventions of Group I and Group III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different method such as a method of providing a

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heat sealable and waterproof packaging having a thermoplastic coating on the back surface thereof and an ink-receiving layer on the outer surface, including the steps of wrapping an article to be packaged with the print medium of claim 1 and sealing the medium by applying heat to the areas where the packaging overlaps to seal the packaging material.

The inventions of Group II and of Group III are related as a process of making and a process of using the article of claim 1. These methods are considered to be patentably distinct from each other because the article is patentably distinct from each of the methods as set forth above.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Cataxinos on September 15, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 108. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (2003/0186003). The reference discloses an ink jet recording sheet comprising a coloring agent accepting layer including a dispersion and a water-soluble resin [0052]. The dispersion is formed from particles and a cationic polymer [0095]. Particles may be silica fine particles or colloidal silica particles [0056]. Cationic

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polymers including diallyldimethylammonium salts may be included [0069, 0077]. The water soluble resin may be polyvinyl alcohol [0103]. Cross-linking agents including boric acid may be present [0121]. The coloring agent accepting layer also contains surfactant which may be a silicone based surfactant [0149, 0156]. The base paper may be cast-coated paper or resin coated paper [0164,0164,0165]. The reference does not state a coating weight for the colorant agent accepting layer, but rather states a thickness for the layer of 10 to 50  $\mu\text{m}$  [0208, 0209]. The reference indicates that the thickness should be determined based upon the porosity of the layer so that the layer has sufficient absorption capacity to absorb all of the ink applied thereto. Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to determine the thickness or the related property of dried coating weight in order to achieve desired absorption capacity. Based upon the disclosure of the reference and the state of the art, it would have been obvious to one of ordinary skill in the art to use a cationic colloidal silica as the colloidal silica of the reference because cationic silica is known in the art and will enhance the ability of the layer to fix anionic dyes commonly present in ink jet recording inks. With respect to the surfactant, since the reference discloses the use of a silicone oil having siloxane structure with side chains modified by organic groups including polyether the reference is considered to disclose surfactants such as those recited by claims 6 and 7.

The reference does not disclose the porosity and smoothness of the coated paperbase, however, as demonstrated by applicants in their specification, a resin coated paper will have no porosity and will inherently meet the limitation of claim 1

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concerning Sheffield porosity. The reference does not disclose the smoothness of the supports used therein, but does disclose that they are highly glossy and that photographic quality materials may be used [0165,0166]. Since photographic quality resin coated papers are known to be both glossy and smooth, it would have been obvious to one of ordinary skill in the art to use a commercially available resin coated paper for the support of the reference with a high degree of both gloss and smoothness.

3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (2003/0186003) as applied to claim 1, 3 and 4 above, and further in view of Shih et al. (6,780,924) or applicants' admissions at [0014] of the specification. Applicants admit that cationic colloidal silica dispersions are commercially available. Shih et al. disclose inclusion of colloidal dispersion silica in a composition for a printable medium (see the abstract and col. 5, lines 34-44). Since this is commercially available colloidal silica and has been used in the art of print media, it would have been obvious to one of ordinary skill in the art to use this colloidal silica as the colloidal silica disclosed by the primary reference for inclusion in a print medium.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (2003/0186003) as applied to claims 1-8 above, and further in view of Kaneko et al. (US2001/0004487). Kaneko et al. is cited as teaching an ink jet recording medium with a preferred support of resin-coated paper which has been used as a support for photography in order to have qualities of gloss, smoothness, hand feeling and high quality appearance [0051]. Based upon the teachings of Kaneko et al. that smoothness is a desired property of a photographic quality resin coated support, it

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would have been obvious to one of ordinary skill in the art to use as the resin-coated paper of the primary reference a known photographic quality support that has a high level of smoothness as suggested by Kaneko et al.


5. It is noted that claims 6 and 7 appear to have improper antecedent basis and should probably depend from claim 3. Clarification is requested.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz  
September 28, 2004



PAMELA SCHWARTZ  
PRIMARY EXAMINER